

Work Order ID 136478

Thursday, September 03, 2015 7:28:59 AM

646.3910
B136478
REV. N/C

136478

ASAP

Thursday
Dec 15

Page 1

Item ID: 646.3910

Revision ID:

Item Name: Shim

Start Date: 9/4/2015 Start Qty: 10.00

Required Date: 9/4/2015 Req'd Qty: 10.00

Reference:

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Customer:

Approvals:

Process Plan: MLS

Date: SEP 04 2015

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
646.3900	N/C

110

0.00

110

Waterjet

FLOW CNC Waterjet

Memo

1-Cut as per Dwg

Dwg Rev: N/C

Prog Rev: N/C

2-Deburr if necessary

0.00

(48)

02/15/12/14

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Quality Control

Memo

0.00

(48)

02/15/12/14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 136478

136478

Page 2

Thursday, September 03, 2015 7:28:59 AM

Item ID: 646.3910 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Shim
 Start Date: 9/4/2015 Start Qty: 10.00 ***10*** Cust Item ID:
 Required Date: 9/4/2015 Req'd Qty: 10.00 ***10*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC8- Inspect parts - second check	0.00							
130									DAS
QC	Memo	0.00				(42)	15-12-15		9
Quality Control									9-89
140	Outsource process-Cadplate per QSI017 4.1.9.1	0.00							
140									
Outsource3	Memo	40.00							
Outsource process - Cad plate	Issue P/O: <u>30835</u> Cad Platting								
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.00							
Packaging									

4 15-12-23

48x 8016-01-B.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : ☐									

Work Order ID 136478

Thursday, September 03, 2015 7:28:59 AM

136478

Page 3

Item ID: 646.3910

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Shim

Start Date: 9/4/2015

Start Qty: 10.00

10

Cust Item ID:

Required Date: 9/4/2015

Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC5- Inspect part completeness to step on W/O

0.00

160

QC

Memo

0.00

Quality Control

DAS

38

9-88

JAN 14 2016

170

Identify as per dwg & Stock Location

0.00

170

Packaging

Memo

0.00

Packaging

***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND
REV***

48

JAN 14 2016

DAS

38

9-88

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Memo

0.02

Quality Control

MCS

JAN 15 2016

MCS 16 01-14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

Thursday, September 03, 2015 7:29:03 AM

Page 1

Work Order ID: 136478

136478

Parent Item: 646.3910

646.3910

Parent Item Name: Shim

Start Date: 9/4/2015

Required Date: 9/4/2015

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV:A 12.12.23 NEW ISSUE DD VERF:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MC1095S.020		Purchased		No		110	sf	12.0000	0.03	0.31579			

MC1095S 020

C1095 Blue Tempered Spring Steel Sheet .020 mcmaster p/n: 9036K499

015/12/14

Location

Loc Qty

Loc Code

MAT019

12

M130477

12

2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

FIRST ARTICLE INSPECTION CHECKLIST

Measured by:		Audited by:		Preliminary Approval:	
Date:		Date:		Date:	
15/12/14		15-01-18			

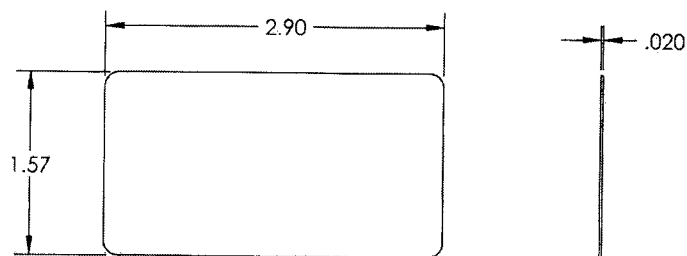
Rev	Date	Change	Revised by	Approved
A	12.11.30	New Issue	KJ	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

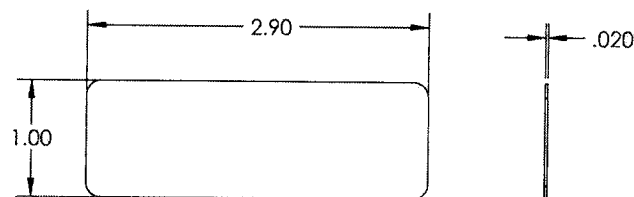
NOTES:

- 1 MATERIAL: SHIM STOCK, C1095 BLUE-TEMPERED SPRING STEEL
- 2 FINISH: CAD PLATE PER QQ-P-416 TYP II CL2
- 3 IDENTIFY IAW MPP-120



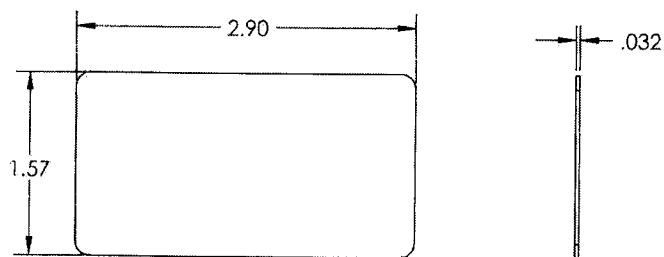
646.3910

R.13 4PL



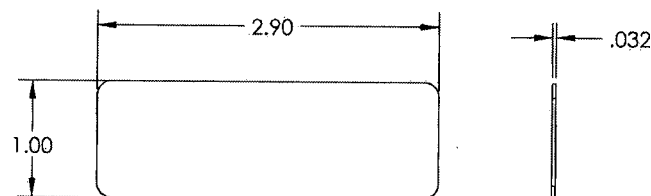
646.3912

R.13 4PL



646.3911

R.13 4PL



646.3913

R.13 4PL

136 478

		646.3913	SHIM	△	△
		646.3912	SHIM	△	△
		646.3911	SHIM	△	△
		646.3910	SHIM	△	△
	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
QTY			PARTS LIST		
NEXT ASSY (S)			APICAL INDUSTRIES		
646.4000			2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5361		
ORIGINAL DATE (MM-DD-YY) DRAWN BY: S. HURT CHECKED BY: P. DRAYCO DRAWING APPROVAL:  CONTRACT NO.			SHIM SEE CAGE CODE: B 07M26 ENTG. NO.: 646.3900 SCALE: NONE SHEET 1 OF 1		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1) 2 PLACE DECIMALS ±.001 2) ANGLES ±.1°					

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

SHIM

David Duval

From: Jean-Luc Menard
Sent: November-12-15 12:35 PM
To: Pablo Bravo
Cc: Patrick Duval; David Duval
Subject: RE: 646.3900 shims

Never updated the dwg, as far as I know it always was .098, that's what the waterjet is programmed to cut.
JL

-----Original Message-----

From: Pablo Bravo
Sent: Thursday, November 12, 2015 12:28 PM
To: Jean-Luc Menard <jmenard@dartaero.com>
Cc: Patrick Duval <pduval@dartaero.com>; David Duval <dduval@dartaero.com>
Subject: RE: 646.3900 shims

JL,
Way back in 2012 it was a .0625" hole. Is the change to .098" because the hole needs to be larger or because we never updated the drawing to add the hole in the first place?

Either size is ok.

Thanks,

Pablo

-----Original Message-----

From: Jean-Luc Menard
Sent: Wednesday, November 11, 2015 4:54 PM
To: Pablo Bravo
Cc: Patrick Duval; David Duval
Subject: 646.3900 shims

Hi Pablo,
Quite a while back you had approved us adding a .098" hole in the corner of these parts for hanging in the cad platting process.

I think it may have been Isam that would have taken care of this.

Anyway, I cannot find any emails on this subject.

If you are still ok with this we will attach this email to the w/o and I will issue an ecr.

Thx

JL

Sent from my iPhone



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO30835**

Purchase Order Date 12/23/2015

PO Print Date 1/4/2016

Page Number 1 of 2

Order From :

GROUP ALTECH
2455 HALPERN

ST LAURENT, MONTREAL H4S 1N9

VC-ALT01

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED

Contact Name

Vendor Phone 514-355-3666

Ship To Contact

Ship To Phone

Ship Via: FedEx Economy collect

Ship Acct:

Buyer

Linda Lacelle

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
	Line Comments		Promise Date				
	Delivery Comments						
1	136478	646.3910 - cad plate	1/12/2016 Yes 1/12/2016		48.00	\$6.15	\$295.00

CAD PLATE PER QQ-P-416, TYPE II, CLASS 2
B136478

Line Total: \$295.00

2	71401-45	Procurement Quality Clause	1/12/2016 No 1/12/2016		1.00	\$0.00	\$0.00
---	----------	----------------------------	------------------------------	--	------	--------	--------

Procurement Quality Clauses
A004 FAA-PMA /TSO
A005 RIGHT OF ENTRY
A016 PERSONNEL QUALIFICATION
A024 PROCESS CERTIFICATIONS
A025 CERTIFICATE OF CONFORMANCE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENTS

8/16-01-13

Note:

1/4/2016



2455, Halpern, Saint-Laurent, QUÉBEC, H4S 1N9
Tel.: (514) 335-3666 Fax.: (514) 335-3868
Internet : www.groupaltech.com

**Bon de livraison / Packing Slip
et / and
Certificat de conformité / Certificate of Compliance**

Bon-Livraison / Pk.Slip # : 114954-1 12/01/2016
Bon-Commande. / W.Order # : 114954
Client P.O. # : PO30835
Transport :

Envoyé à / Ship to

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

Commandé par / Order by

DART AEROSPACE LTD (1427)
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

#	<u>No. Job</u> <u>No. Réf</u>	<u>NoSerie / Part Number</u> <u>Nom Produit / Product</u>	<u>Traitement</u> <u>Process</u>	<u>Poids</u> <u>Weight</u>	<u>Qté</u> <u>Qty</u>	<u>Envoyé</u> <u>Sent</u>	<u>A venir</u> <u>BO</u>
1	UNIT	646.3910 Rev.	CADMIUM QQ-P-416F TY:2 CL:2 + HYDRO ENBRITAL RELIEF	0.00	48	48	0

8/16-01-B

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
Our financial and legal responsibility will not be higher than the amount of invoice.